

**Notice of Allowability**

Application No.

10/629,685

Examiner

William H. Rodriguez

Applicant(s)

KNIGHT, ANDREW F.

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3746

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 3/30/05.
2. ☒ The allowed claim(s) is/are 1,4,6-11,13,17,21,25-33 and 41-47.
3. ☒ The drawings filed on 30 March 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### DETAILED ACTION

This office action is in response to the amendment and remarks filed 3/30/05.

#### *Allowable Subject Matter*

1. Claims 1, 4, 6-11, 13, 17, 21, 25-33, 41-47 are allowed.

With respect to independent claim 1, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show *“each of said storage tanks is configured to be filled with said fluid under a low pressure when its associated propellant entrance and pressurant exit valves are open and its associated propellant exit and pressurant entrance valves are closed, and to be drained of said fluid under a high pressure by the force of a pressurant when its associated propellant entrance and pressurant exit valves are closed and its associated propellant exit and pressurant entrance valves are open, wherein, for each storage tank, its associated valves are configured to be opened and closed in a cycle to sequentially fill and drain their associated storage tank of said fluid, said cycle having a cycle time, wherein said cycles of said associated valves of said storage tanks are out of phase with each other such that at some time in which one storage tank is being filled with said fluid, at least one other storage tank is being drained of said fluid, and wherein said cycle time for each storage tank is between 1 and 500 milliseconds”*, in combination with the other claim limitations.

With respect to independent claim 21, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show *“said storage tank is configured to be filled with said fluid under a low pressure when said propellant entrance and pressurant exit*

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*valves are open and said propellant exit and pressurant entrance valves are closed, and to be drained of said fluid under a high pressure by the force of a pressurant when said propellant entrance and pressurant exit valves are closed and said propellant exit and pressurant entrance valves are open, wherein said valves are configured to be opened and closed in a cycle to sequentially fill and drain said storage tank of said fluid, said cycle having a cycle time, wherein said accumulator is configured to provide a substantially continuous flow of said fluid at said high pressure by filling with said fluid when said storage tank is draining of said fluid, and by draining of said fluid when said storage tank is filling with said fluid, wherein said cycle time is between 1 and 500 milliseconds”, in combination with the other claim limitations.*

With respect to independent claim 25, the following is an examiner's statement of reasons for allowance: the prior art of record neither discloses nor makes obvious the combination set forth in the independent claims, and especially does not show “*wherein at least the at least two pressurant entrance valves and the at least two pressurant exit valves are connected to said at least one pressure vessel, wherein said pressurizer is configured to be filled with said fluid under a low pressure and to be drained of said fluid under a high pressure by the force of a pressurant, wherein the at least two pressurant entrance valves, the at least two pressurant exit valves, the at least two propellant entrance valves and the at least two propellant exit valves are configured to be opened and closed in said cycle to sequentially fill and drain said pressurizer of said fluid, said cycle having a cycle time, wherein the pressurizer is configured to be filled with said fluid and drained of said fluid substantially simultaneously so as to deliver a substantially continuous flow of said fluid, and wherein said cycle time is between 1 and 250 milliseconds”, in combination with the other claim limitations.*

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

#### **Claims**

The claims will be renumbered in the issued patent as follows.

Old Claim #→New Claim #

1→1; 4→2; 6→3; 7→4; 8→5; 9→6; 10→7; 11→8; 13→9; 17→15; 21→16;  
25→19; 26→20; 27→21; 28→22; 29→23; 30→24; 31→25; 32→26; 33→27; 41→10;  
42→11; 43→12; 44→13; 45→14; 46→17; 47→18.


#### ***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 571-272-4831. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
William H. Rodriguez 5/26/05  
Examiner  
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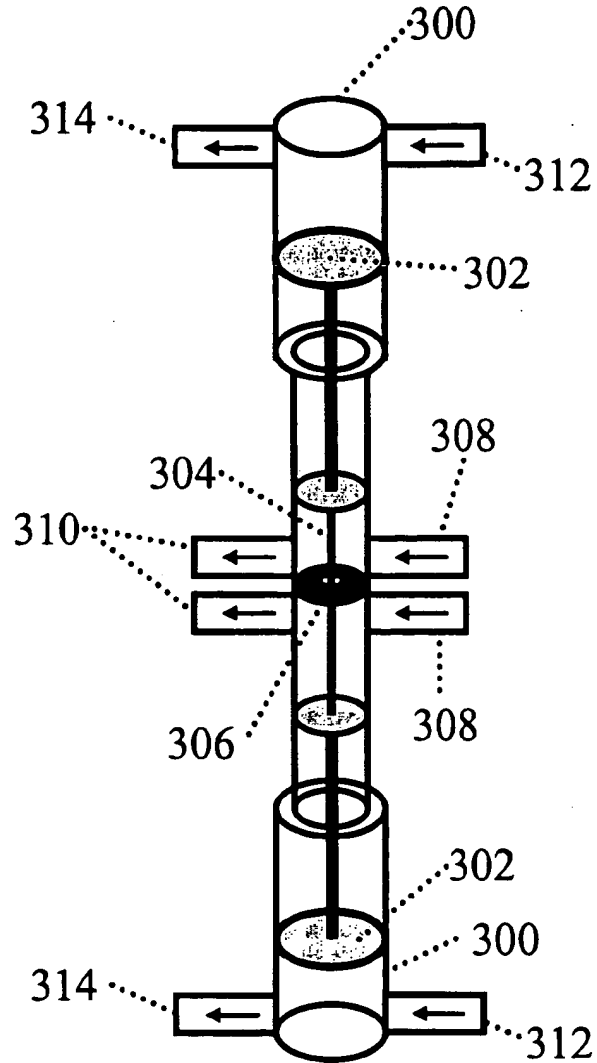
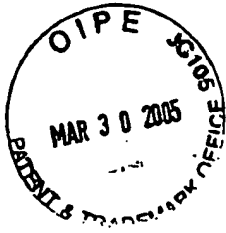


Fig. 18.

approved F. 18  
W. R.  
5/25/05